REMARKS/ARGUMENTS

Reconsideration of the application is respectfully requested.

Claims 6-11, 13-14, 16 and 18 stand rejected under 35 USC 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605. The Examiner cites Renard as disclosing a refrigerated display comprising an insulated cabinet 50 defining a product display area/shelves 1 maintained in a refrigerated condition at a temperature above 32 degree F and having a compartment 37 separate from the product display area 1, an evaporator 28 disposed in the compartment 37, at least one air circulator 29 disposed within the compartment 37 in cooperative relationship with the evaporator 28; and an air circulation circuit (23-26) connecting the product display area 1 and in direct air flow communication with the compartment 37. The Examiner concedes that Renard does not disclose a relatively high air side pressure drop evaporator.

The Examiner cites Kutscher et al. as teaching the use of a high air side pressure drop heat exchanger 10 with fin density ranging from 3 fins to 10 fins per inch in a heat exchanging system for the purpose of controlling pressure drop, and also as disclosing a draw through flow by the action of a fan 12, citing Fig. 1, column 12, lines 31-67. It is the opinion of the Examiner that it would have been obvious to one having ordinary skill in the art at the time the invention was made, to have modified the refrigerated display cabinet of Renard in view of Kutscher et al. such that a high air side pressure drop heat exchanger with fin density ranging from 3 to 10 fins per inch could be provided in order to run a refrigeration system. Applicants respectfully traverse this rejection.

Applicants respectfully submit that Kutscher et al. would not, and can not, be read by one having ordinary skill in the art to teach providing a relatively high air side pressure drop evaporator as taught by Applicants and recited in independent claims 6, 9 and 10. Kutscher et al. teach enhancing the heat transfer coefficients of a fin and tube heat exchanger by increasing heat transfer surface area with high porosity fins while simultaneously maintaining a small boundary layer thickness over the area and controlling, i.e. minimizing, the gas side pressure drop. Kutscher et al. disclose pleating or corrugating the fins to provide relatively wide flow channels, e.g. wide fin spacing, to allow the cooling gas to more readily flow through the channel but still slowing the velocity of the gas as it passes through the fins sufficiently to limit pressure drop (see col. 5, line 53 through col. 6, line 25). While Kutscher et al. does disclose an

embodiment of a high porosity fin heat exchanger having a fin spacing ranging from 3 to 10 fins per inch, Kutscher et al. further state at column 12, lines 44-47, as follows:

> "In another preferred embodiment, a lower fin density, i.e. less than 3 fins per inch, is employed to reduce pressure drop by widening the channels and reducing channel pressure drop."

Applicants respectfully submit that one having ordinary skill in the art would be led by Kutscher et al. to increase the fin spacing to provide wider flow channels between the fins to reduce pressure drop to permit the use of porous fins on the tubes of the evaporator in the refrigerated display case of Renard. Kutscher et al. are concerned about controlling, i.e. limiting, air side pressure drop and can not be read to teach the advantage of using a relatively high air side pressure drop evaporator to improve air flow uniformity through the evaporator. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 6-11, 13-14, 16 and 18 under 35 USC 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605.

Claims 12, 15 and 17 stand rejected under 35 USC 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605, as applied to claim 6, 9 and 10 above, and further in view of Navarro, U.S. Patent 6,145,327. The Examiner cites Navarro as teaching the use of a plurality of fans 16 along an evaporator coil 17 in a refrigerated display case for the purpose of running a refrigeration system, citing Fig. 7. It is the opinion of the Examiner that it would have been obvious to one having ordinary skill in the art at the time the invention was made, to have modified the refrigerated display cabinet of Renard in view of Kutscher et al., and further in view of Navarro such that a plurality of fans could be provided to run a refrigeration system. Further, the Examiner considers spacing the fans at a distance of two feet is an obvious design choice of the individual skilled in the art, contending that there is no critically or unexpected result from it. Applicants respectfully traverse this rejection.

Applicants admit that Navarro discloses a refrigerated display case having a plurality of fans. However, Navarro does not teach, disclose or even suggest the use of a plurality of fans in combination with a high fin density fin and tube evaporator, i.e. high air side pressure drop evaporator, as taught by Applicants. Nor does Navarro

recognize the advantage of using a plurality of fans in combination with a high air side pressure drop as taught by Applicants. The use of a plurality of fans in conjunction with a high fin density evaporator provides a high air side pressure drop resulting in a more uniform distribution of air flow through the evaporator. Navarro does not even disclose a fin and tube evaporator in association with the plurality of fans 16. Rather Navarro, at column 7, lines 19-21, merely refers to "evaporator coils (not shown) located in a coil housing 17 where air circulated in the refrigerated showcase is cooled." Applicants respectfully submit that there is no teaching or disclosure in Navarro, taken alone or in combination with Kutscher et al., that would lead one having ordinary skill in the art to replace the finned evaporator/single air circulation fan assembly of Renard with a plurality of fans in association with a higher fin density evaporator, and therefore a relatively high air side pressure drop evaporator, as taught by Applicants. Applicants respectfully request that the Examiner withdraw the rejection of claim 12, 15 and 17 under 35 USC 103(a) as being unpatentable over Renard, U.S. Patent 5,502,979, in view of Kutscher et al., U.S. Patent 6,378,605 and further in view of Navarro, U.S. Patent 6,145,327.

In summary, Applicants respectfully submit that the claims 6 – 18 distinguish over the art of record for the reasons stated hereinbefore. Accordingly, in view of the Arguments presented herein, Applicants respectfully request that the Examiner reconsider all rejections of the claims as now presented, and upon reconsideration withdraw all rejections of now pending claims 6-18, and pass claims 6-18 to allowance.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 03-0835.

Respectfully submitted,
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